

## Educational Opportunities

- [M.Sc. or Ph.D. degrees in underwater acoustics or marine bioacoustics - Centre for Marine Science & Technology at Curtin University in Perth, Western Australia](#)

State: [NSW](#) | [VIC](#) | [QLD](#) | [SA](#) | [WA](#) | [Online / Distance](#)

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### New South Wales

Institution: **The University of Sydney**  
Location: Faculty of Architecture, Design and Planning  
Course Title: Graduate program in Architectural Science, Audio and Acoustics stream (Gr  
Web Link: <http://sydney.edu.au/architecture/study/audio-acoustics.shtml>  
Contact: [Dr Densil Cabrera](#)  
Course Description: This graduate coursework program offers a balance of study in acoustics, au

Institution: **UNSW Australia**  
Location: On campus  
Course Title: MECH9325 Fundamentals of Acoustics and Noise  
Web Link: <http://www.handbook.unsw.edu.au/postgraduate/courses/2014/MECH9325.html>  
Contact: [Assoc Prof Nicole Kessissoglou](#)  
Course Description: This course is intended to give students the skills to meet the needs of those

### Victoria

Institution: **RMIT University**  
Location: City Campus  
Course Title: Audio Engineering  
Web Link: <http://www.rmit.edu.au/courses/005099>  
Contact: [Prof Xiaojun Qiu](#)  
Course Description: Overview of Learning Activities:  
- Weekly 2-hour in-class lectures  
- Weekly 2-hour laboratory practices

#### Lecture Topic:

1. Introduction and psychoacoustics
2. Speech production and analysis
3. Speech and audio compression
4. Hearing aids
5. Audio mixing
6. Mid-Semester Test

7. Electroacoustics: microphones, speakers and amplifiers
8. Room acoustics
9. Sound absorption
10. Sound transmission
11. Sound mufflers and sound field control
12. End-of-Semester Test

### Laboratory Topic:

1. Tone and Noise (Excel and Adobe Audition)
2. Speech Compression
3. Sessions and Mixing on Non-Linear Media Mastering
4. Electro-Acoustics - Sound Level Meter and Microphone Sensitivity Measurement
5. Background Noise and Room Functionality
6. Room Acoustics II - Sabine Equation
7. Transmission Loss/Insertion Loss

## Queensland

Institution: **The University of Queensland**  
Location: St Lucia campus  
Course Title: AUDL7800 Acoustics and Psychoacoustics in Audiology  
Web Link: [http://www.uq.edu.au/study/course.html?course\\_code=AUDL7800](http://www.uq.edu.au/study/course.html?course_code=AUDL7800)

Cost: You must be enrolled in the Master of Audiology Studies program to undertake

Contact: [Dr Wayne Wilson](#)

Course Description: AUDL7800 is an introductory course within the Master of Audiology Studies

1. Demonstrate an understanding of the principles, methods and applications of acoustics as related
2. Demonstrate an understanding of the principles, methods and applications of psychoacoustics as

## Western Australia

Institution: **Curtin University**  
Location: Bentley Campus  
Course Title: MCEN6007 (v.1) Engineering Noise Control  
Web Link: <http://handbook.curtin.edu.au/units/31/319111.html>  
Contact: [Assoc Prof Ian Howard](#)

Course Description: Syllabus: Acoustic wave propagation; Sound pressure dB scale; Properties of

## South Australia

Institution: **The University of Adelaide**  
Location: City Campus, North Terrace  
Course Title: MECH ENG 4115 / MECH ENG 7027 Engineering Acoustics  
Web Link: <http://www.adelaide.edu.au/course-outlines/104450/1/sem-2/>  
Contact: [Assoc Prof Carl Howard](#)

Course Description: The Engineering Acoustics course provides learners with knowledge in acou

- wave equation and its application
- sound power, sound pressure, energy density and sound intensity
- plane and spherical waves
- sound pressure addition and subtraction
- noise reduction combination

### INSTRUMENTATION REVIEW

- noise measurement instrumentation
- practical measurement procedures

### NOISE CRITERIA REVIEW

- various measures to quantify noise
- hearing damage risk
- speech interference
- ambient noise specification
- occupational and environmental noise criteria
- psychoacoustics

### SOUND SOURCES and OUTDOOR SOUND PROPAGATION

- monopoles, dipoles and quadrupoles
- line sources
- coherent and incoherent plane sources
- directivity and reflection effects
- sound propagation outdoors; ground effects, air absorption, atmospheric turbulence and temperature

### SOUND POWER

- radiation impedance and the radiation field of a sound source
- sound power measurements
- sound pressure measurements in the laboratory and in the field
- sound intensity measurements
- surface vibration measurements.

### SOUND IN ENCLOSED SPACES

- low frequency analysis
- high frequency analysis
- reverberation time, reverberant and direct sound fields
- sound absorbers
- measurement of the room constant
- prediction of sound levels generated by interior sound sources
- flat and long rooms
- applications of sound absorption

### SOUND ABSORBING MATERIALS

- flow resistivity and its measurement
- sound propagation in porous media

- measurement and prediction of statistical sound absorption coefficients

### ACOUSTIC ENCLOSURES AND BARRIERS

- sound transmission loss, STC rating, single and double walls
- acoustic enclosure design
- acoustic barrier design
- pipe wrappings.

### ACOUSTIC PREDICTION SOFTWARE

- ENC: engineering noise control software
- SoundPlan

## Online and Distance Courses

Institution:	<b>The University of New South Wales</b>
Location:	Online
Course Title:	Physclips: a multi-level, multimedia introduction to mechanics, oscillations, w
Web Link:	<a href="http://www.animations.physics.unsw.edu.au/">http://www.animations.physics.unsw.edu.au/</a>
Cost:	Free
Contact:	<a href="#">Prof Joe Wolfe</a>
Course Description:	Physclips is a multi-level, multimedia introduction to physics. The first chapter
	<ul style="list-style-type: none"><li>- Rich multimedia tutorials may be used as lessons or reference.</li><li>- html pages give both deeper and broader discussions.</li><li>- Movies and animations may be downloaded by teachers for use in their own lessons.</li></ul>

Physclips is supported by Australia's Office for Learning and Teaching and the School of Physics at UN

Institution:	<b>UNSW, Canberra</b>
Location:	Online / Distance
Course Title:	Professional Education in Acoustics
Web Link:	<a href="http://www.aaac.org.au/au/aaac/education.aspx">http://www.aaac.org.au/au/aaac/education.aspx</a>
Cost:	Details available from webpage
Contact:	<a href="#">Marion Burgess</a>
Course Description:	This professional education program is aimed at providing appropriate short